

The opinion in support of the decision being entered today was *not* written for publication in and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* CARL G. DEMARCKEN

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Appeal 2006-3164  
Application 09/431,365  
Technology Center 3600

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Decided: February 12, 2007

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Before STUART S. LEVY, LINDA E. HORNER and ANTON W. FETTING,  
*Administrative Patent Judges*.

ANTON W. FETTING, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal involves claims 1-4, 6, 7, 8, 27, 28 and 52-59, the only claims pending in this application. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 134.

We AFFIRM-IN PART.

## BACKGROUND

The appellant's invention relates to a travel planning system (Spec 1). An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

## 1. A travel planning system comprising:

a requirements generator module to generate a set of diverse travel requirements, by establishing a plurality of travel requirement templates, and for each travel requirement template, defining a plurality of travel requirements corresponding to different values of the travel requirements; and

a selection module to output a set of diverse travel options, the number of travel options in the set of diverse travel options being fewer in number than the number of travel options in a candidate set of travel options and for each diverse travel requirement in the set of diverse travel requirements, selecting from the candidate set of travel options one or more travel options that satisfy that travel requirement with the candidate set of travel options represented using a data structure that compactly stores the candidate set of travel options.

## PRIOR ART

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

DeMarcken US 6,295,521 B1 Sep. 25, 2001  
(Jul. 2, 1998)

Iyengar US 6,360,205 B1 Mar. 19, 2002  
(Mar. 5, 1999)

Karch US 6,442,537 B1 Aug. 27, 2002  
(Jun. 24, 1999)

## REJECTIONS

Claims 1-4, 6, 7, 8, 27, 28, 52-54<sup>1</sup> and 56-58 stand rejected under 35 U.S.C. § 103(a) as obvious over DeMarcken and Karch.

Claims 55 and 59 stand rejected under 35 U.S.C. § 103(a) as obvious over DeMarcken, Karch and Iyengar.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the examiner's answer (mailed March 3, 2006) for the reasoning in support of the rejection, and to appellant's brief (filed September 16, 2005) and reply brief (filed May 5, 2006) for the arguments thereagainst.

## OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the determinations that follow.

*Claims 1-4, 6, 7, 8, 27, 28, 52-54 and 56-58 rejected under 35 U.S.C. § 103(a) as obvious over DeMarcken and Karch.*

The examiner applies DeMarcken to all of the claimed subject matter except for a rules template. The examiner asserts that rules templates are notoriously old and well known and applies Karch as evidence of such notoriety. (Answer 3-4).

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<sup>1</sup> Claims 52 and 53 are not included in the formal statutory basis for the rejection (Answer 3), but are included in the analysis (Answer 6-7) and are therefore treated as part of the rejection.

As to claim 1, the appellant argues that DeMarcken fails to describe either the claimed diverse travel options or a requirements generator to generate a set of diverse travel requirements (Br 9). The examiner responds that DeMarcken shows these features at col. 50, lines 11-20, col. 60-61 (Answer 10-11). We note that this portion of DeMarcken recites searching for characteristics such as cost, duration, times, and numbers of legs and segments. These may be fairly characterized as options. We also note that the examiner's reliance on col. 51 and 55 describes an enumeration process that generates requirements (Answer 3). We also note that the specification does not define the word "diverse", although the Specification p. 2 suggests it refers to diversity of airlines. A person of ordinary skill in the art would have taken the searching capabilities in DeMarcken to include multiple and diverse airlines based on the databases that are queried to produce a large number of itineraries (OAG Flight Desk, Sabre, Apollo, Amadeus and Worldspan – col. 4 lines 52-63). Therefore, we find the appellant's arguments to be unpersuasive.

The appellant next argues that claim 1 calls for a travel requirements template rather than a rule (Br. 9). The examiner responds that rule templates are notoriously well known as evidenced by Karch and a person of ordinary skill in the art would have applied such templates to DeMarcken for the sake of the efficiencies taught by Karch. We note that Karch does indeed teach the use of rule templates for generalized databases for the purpose of improving the matching of rules with the database objects they are targeted towards (col. 2 lines 44-48), and therefore provides suggested implementation details for the database access portion of DeMarcken's system. Therefore, we find the appellant's arguments to be unpersuasive.

The appellant next argues that DeMarcken fails to disclose defining travel requirements corresponding to different values for each template (Br. 9). We note that DeMarcken Fig. 21 shows different values for date and airport templates. Therefore, we find the appellant's arguments to be unpersuasive.

The appellant next argues that Karch fails to disclose diverse travel options, DeMarcken fails to disclose generating rules for travel requirements and the examiner has provided no reason to combine Karch with DeMarcken (Br. 10). As to motivation, again, the examiner has argued notoriety of the use of rule templates and Karch provides the reasons a person of ordinary skill in the art would consider using them in contexts such as DeMarcken's for improved database management. As to diverse travel options, this a repetition of an argument, *supra*, and we direct the appellant to our response to the earlier instance of the argument. As to generating rules, as the appellant points out (Br. 9), claim 1 makes no reference to rules. Therefore, we find the appellant's arguments to be unpersuasive.

The appellant next argues that DeMarcken's nodes in the pricing graph are not travel requirements but are elements of travel options, and DeMarcken fails to teach using a set of preference functions provided according to a diversity process (Br. 10) and a selection module to output a set of diverse travel options (Br. 12). DeMarcken shows these options with respect to travel requirements in col. 6 lines 56-66, e.g. cost, duration and travel time.

We note that DeMarcken Fig. 22 shows outputting travel options from a selection module in Fig. 21. As to diversity, which the appellant characterizes as meaning across multiple carriers, although we do note that, for any given itinerary, DeMarcken expressly restricts its queries to a single carrier, DeMarcken teaches that this is for efficiency (Col. 23, Lines 50-52), and does not discourage such

queries, and is silent as to whether it searches multiple carriers across itineraries. As we noted above, although DeMarcken does not expressly teach outputting multiple air carriers, a person of ordinary skill in the art would have considered this a natural manner of implementation given the diversity of carriers in the databases that DeMarcken teaches accessing. Therefore, we find the appellant's arguments to be unpersuasive.

As to claim 4, the appellant argues that DeMarcken fails to show enumerated pricing solutions ordered according to preference functions and selection to produce a diverse set of travel options (Br. 13). DeMarcken shows enumeration of pricing solutions ordered according to preference functions col. 49, line 41-col. 50, line 10. DeMarcken shows selection to produce a diverse set of travel options as we noted above. Therefore, we find the appellant's arguments to be unpersuasive.

The appellant next argues that DeMarcken fails to show operation on a price graph to provide ordered sets of travel options using preference functions (Br. 13). DeMarcken shows providing the options from the enumeration process in response to multiple user specified parameters (col. 49, lines 41-44). Therefore, we find the appellant's arguments to be unpersuasive.

As to claim 6, the appellant argues that DeMarcken's industry defined databases are not travel requirements. DeMarcken shows that the query is fed into industry defined databases (col. 4, lines 52-59). These databases limit the options, and such limitations provide inherent travel requirements, i.e. the options must be among those available within the database. Therefore, we find the appellant's arguments to be unpersuasive.

As to claim 52, the appellant argues that DeMarcken fails to show defining diversity requirements by establishing travel requirement templates and selecting

from a candidate set of options that satisfy requirements and combining options to generate a diverse set of options (Br. 14). Each of these elements were argued above by the appellant and found to be unpersuasive, and is similarly found unpersuasive here.

As to claims 53 and 57, the appellant argues that the art fails to show basing values for a requirement template on candidate set of travel options (Br. 14). The examiner responds that Karch teaches putting requirements in templates. While we agree that is indeed what Karch teaches, claims 53 and 57 go further in requiring that the requirements are the result rather than the source of the options. Neither DeMarcken nor Karch teach this. Therefore, we find the examiner's arguments to be unpersuasive.

Accordingly we sustain the examiner's rejection of claims 1-4, 6, 7, 8, 27, 28, 52, 54, 56 and 58 under 35 U.S.C. § 103(a) as obvious over DeMarcken and Karch, but do not sustain the rejection of claims 53 and 57.

*Claims 55 and 59 rejected under 35 U.S.C. § 103(a) as obvious over DeMarcken, Karch and Iyengar.*

As to claim 55<sup>2</sup>, the appellant argues that Iyengar's multiple air carriers are part of the user selectable query and not values for the travel requirement template.

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<sup>2</sup> The appellant twice refers to claim 55 as claim 54 in this section of the brief (Br. 15). However the rejection, the heading used by the appellant and the remainder of the section refer to claim 55 rather than claim 54, and claim 55 is clearly intended.

As we noted above, although DeMarcken does not expressly teach outputting multiple air carriers, a person of ordinary skill in the art would have considered this a natural manner of implementation given the diversity of carriers in the databases that DeMarcken teaches accessing. Therefore Iyengar in combination with DeMarcken would have similarly considered this a natural implementation. We also note that “[t]he steps comprising the process are the essential features for consideration in determining the right of appellants to a patent – not the particular material to which the process is applied nor the particular substance obtained by its application.” *In re Fahrni*, 41 C.C.P.A. 768, 771, 210 F.2d 302, 303, 100 U.S.P.Q. (BNA) 388, 390 (C.C.P.A. 1954). Therefore, the number of air carriers introduced to DeMarcken’s process, or to the claimed process, is essentially a field of use limitation that does not limit the actual steps within the process claim. Therefore, we find the appellant’s arguments to be unpersuasive.

Accordingly we sustain the examiner’s rejection of claims 55 and 59 under 35 U.S.C. § 103(a) as obvious over DeMarcken, Karch and Iyengar.

## CONCLUSION

To summarize,

- The rejection of claims 1-4, 6, 7, 8, 27, 28, 52, 54, 56 and 58 under 35 U.S.C. § 103(a) as obvious over DeMarcken and Karch is sustained.
- The rejection of claims 53 and 57 under 35 U.S.C. § 103(a) as obvious over DeMarcken and Karch is not sustained.
- The rejection of claims 55 and 59 under 35 U.S.C. § 103(a) as obvious over DeMarcken, Karch and Iyengar is sustained.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

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